

# Time-Dependent Solution And Optimal Control Of A Bulk Service Queue

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## Summary

We consider the queueing system denoted by  $M/M(N)/1/N$  where customers are served in batches of maximum size  $N$ . The model is motivated by a traffic application. The time-dependent probability distribution for the number of customers in the system is obtained in closed form. The solution is used to predict the optimal service rates during a finite time horizon.

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